Notice of Allowability	Application No.	Applicant(s)	
	09/384,380	TASAKA ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *September 15, 2005*.

2. ☒ The allowed claim(s) is/are *1-3,5-7 and 10-36*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 03-15-2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 1-3, 5-7, 10-36 are allowed over the closest references cited below.

The present invention is drawn to a composition comprising thermoplastic component (A) and 50-300 pw, relative to 100 pw of (A), of a metal hydrate (B). Component (A) is comprised of (*a*) 100 pw of a block copolymer made of at least two blocks A and at least one block B, and/or hydrogentated block copolymer obtained by hydrogenating said block copolymer, (*b*) 10-100 pw of a non-aromatic series softening agent, (*c*) 30-400 pw of a C_2/α-olefin copolymer synthesized in the presence of a single site metallocene catalyst, (*d*) 0-200 pw of propylene resin, (e) 0.01-0.6 pw of organic peroxide, and (f) 0.03-1.8 pw of a (meth)acrylate series and/or allyl series crosslinking aid. Metal hydrate (B) is such that, (*i*) when (B) is in an amount of 50 pw or more but less than 100 pw, 50 pw or more of the metal hydrate is made of a metal hydrate pretreated with a silane coupling agent having a vinyl group or an epoxy group at its terminal, or (*ii*) when (B) is in an amount of 100 pw or more but 300 pw or less, at least half of the amount of (B) is made of metal hydrate pretreated with a silane coupling agent having a vinyl group or an epoxy group at its terminal.

Another aspect of the invention is drawn to a composition in which 50-200 pw of C_2/α-olefin copolymer synthesized in the presence of a single site metallocene catalyst and 0-100 pw of polypropylene are used instead. A further aspect of the invention is a composition in which 30-70 pw of softening agent, 50-200 pw of C_2/α-olefin copolymer synthesized in the presence of a single site metallocene catalyst and having a density of less than 0.91, 10-60 pw of polypropylene, and 0.1-1.5 pw of peroxide is used. In this case, the amount of metal hydrate lies in the range of 100-250 pw. A further aspect of the invention is a process for preparing the inventive compositions. A further aspect of the invention is a molded part obtained by molding the inventive compositions. Another aspect of the invention is a partially crosslinked versions of the claimed thermoplastic compositions.

Tasaka *et al.* (U.S. 6,433,062) dislcoses a composition comprising 100 pw of thermoplastic component (A) and up to 100 pw of inorganic filler (B). Component (A) is comprised of (*a*) 100 pw of a block copolymer made of at least two blocks A and at least one block B, and/or hydrogentated block copolymer obtained by hydrogenating said block copolymer, (*b*) 40-240 pw of a non-aromatic series softening agent, (*c*) 5-300 pw of a C_2/α-olefin copolymer synthesized in the presence of a single site metallocene catalyst, (*d*) 5-60 pw of propylene resin, (e) at most 1.5 pw of organic peroxide, and (f) less than 3.5 pw of a (meth)acrylate series and/or allyl series crosslinking aid. Use of magnesium hydroxide as the inorganic filler is contemplated. The reference does not disclose surface treatment of said magnesium hydroxide. Apparently, arriving at such a concept in order to arrive at the subject matter of the instant claims would not have been obvious to one of ordinary skill in the art.

Tasaka *et al.* (U.S. 5,929,165) teaches a composition comprising 100 pw of thermoplastic component (A) and up to 100 pw of inorganic filler (B). Component (A) is comprised of (*a*) 100 pw of a block copolymer made of at least two blocks A and at least one block B, and/or hydrogentated block copolymer obtained by hydrogenating said block copolymer, (*b*) 20-300 pw of a non-aromatic series softening agent, (*c*) 1-100 pw of a peroxide crosslinking-type olefinic resin, (*d*) 5-60 pw of a peroxide decomposiing-type (*i.e.*, polypropylene resin), (e) organic peroxide, and (f) (meth)acrylate series and/or allyl series crosslinking aid. Use of magnesium hydroxide as the inorganic filler is contemplated. The reference does not disclose surface treatment of said magnesium hydroxide, and it does not indicate that component (*c*) is prepared from a single site metallocene-based catalyst.

Kobayashi *et al.* (U.S. 6,414,059) teaches a composition comprising thermoplastic component (A) and 50-300 pw, relative to 100 pw of (A), of a metal hydrate (B). Component (A) is comprised of (*a*) 10-40 wt % of of a block copolymer made of at least two blocks A and at least one block B, and/or hydrogentated block copolymer obtained by hydrogenating said block copolymer, (*b*) 10-40 wt % of a non-aromatic series softening agent, (*c*) 0-40 wt % of a C_2/α-olefin copolymer, (*d*) 5-50 wt % of an ethylene-propylene copolymer rubber, (*e*) 0-30 wt % of polypropylene resin, (*f*) 0-15 wt % of a modified polyethylene resin, (*g*) 0.01-0.6 wt % of organic peroxide, and (*h*) 0.03-1.8 pw of a (meth)acrylate series and/or allyl series crosslinking aid.

Metal hydrate (B) is such that, (*i*) when (B) is in an amount of 50 pw or more but less than 100 pw, 50 pw or more of the metal hydrate is made of a metal hydrate pretreated with a silane coupling agent, or (*ii*) when (B) is in an amount of 100 pw or more but 300 pw or less, at least half of the amount of (B) is made of metal hydrate pretreated with a silane coupling agent. The reference does not teach the claimed composition in that the amount of C_2/α-olefin copolymer lies outside the range set forth in the instant claims (amount based on 10-40 wt % of block copolymer) and there is no indication that it is prepared in the presence of a single site metallocene catalyst.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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December 7, 2005

LING-SUI CHOI
PRIMARY EXAMINER